l: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

225 Mr. *Steller* writes that he was certainly informed, that in the bodies of whales thrown upon the coaſt of *Kamtſchatka*, there have been found harpoons marked with *Latin* letters; but by what means he could be certain of this, I know not; for the natives have no idea of letters; and before our arrival, none of our Coſſacks ever ſaw a *Latin* letter.

237 262 Many are the advantages which the *Kamtſchadales* derive from this plenty of whales: of the ſkin they make ſhoe ſoles and ſtraps; they eat the fleſh, as likewiſe the fat which they alſo burn; they ſew their boats with the beard, of which alſo they make nets for foxes and fiſh; out of the lower jaw they form a ſort of ſledge, and make knife-handles, rings, and ſeveral ſmall things of it beſides; the inteſtines ſerve for barrels, and other veſſels; out of the nerves and blood-veſſels they make ropes; and of the vertebræ, ſeats. The moſt delicate pieces of the whale are the tongue and fins. I thought that the whale's fat with grout was not unpleaſant, but I can't ſay, that I was then a proper judge, for hunger makes every thing agreeable.

226 736 825 They never go a fiſhing for the kaſatki, but if this fiſh is thrown on ſhore they uſe its fat like that of the whale. Mr. *Steller* ſays, that, in the year 1742, eight of them were thrown on ſhore at once, near the *Lopatka*; but the diſtance and the bad weather prevented his going to examine them. He was told, that the largeſt never exceed four fathoms in length; that they have ſmall eyes, a wide mouth, and great ſharp teeth, with which they wound the whale; but that they tear up the belly of the whale with a ſharp fin which is upon their backs, is a falſe report; for though this fin is about five feet long, very ſharp, and in the ſea ſtands quite upright, yet it is altogether ſoft, and conſiſts only of fat: nay the animal itſelf is almoſt all fat having hardly any muſcular fleſh.

There

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

The different ſpecies of thoſe fiſhes which are here called red fiſh ſhall be mentioned in giving an account of the time when they come out of the ſea into the rivers; it being remarked that they always obſerve the ſame order, the ſame ſpecies which comes out firſt one year continuing to do ſo the following. This the *Kamtſchadales* find to be ſo certain, that they call their months by the name of the fiſh which are then caught.

The largeſt and beſt of theſe fiſh, and which come firſt out of the ſea, are called chavitſi. It reſembles the common ſalmon, though it is a great deal broader; is about three feet and a half long, and weighs a pood and a half; its breadth is about the fourth part of its length; its noſe is ſharp, the upper jaw being longer than the lower; its tail is equal; the back is bluiſh, with ſome ſmall black ſpots; its ſides are of a ſilver colour, and its belly white; its gills are long and ſmall; and its fleſh is red both raw and boiled.

They ſwim up the rivers with ſuch force that the water ſeems to riſe like a wall before them; which the *Kamtſchadales* obſerving get into their boats, and throw out their nets. This fiſh does not come up in ſuch large ſhoals as the others, nor is ſuch plenty caught as to make *eukol* of it, except upon the river *Kamtſchatka*; and even there it is ſo rare that it is only uſed on feaſts or holydays, and after all it is ſo fat that it preſently turns bitter. The Coſſacks, for the moſt part, ſalt it, particularly the belly, back, and head. The ribs are dry and hard, but the belly is truly a delicate food, at leaſt no fiſh there comes up to it; and what they dry in the ſun, if not better than the *Jakutſki* ſturgeon, is at leaſt not worſe.

Of all the rivers that run into the Eaſtern Ocean this fiſh is only found in the river *Kamtſchatka* and the bay of *Awatſcha*; and of thoſe that fall into the *Penſchinſka* ſea, only in the *Bolſcheretſkoi* river: beſides, Mr. *Steller* ſays, that none is to be found further north than 54°, and it is certain that it is not

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

136 to be found near *Ochotſka*, where it is eſteemed a valuable preſent.

226 The nets with which this fiſh[1] is caught are made of yarn
262 about the thickneſs of ſugar ropes; and the fiſhing begins about
576 the middle of *May*, and laſts ſix weeks. The *Kamtſchadales*
574 eſteem this fiſh ſo much, that the firſt they catch they bake and eat with great rejoicings. This cuſtom is very diſagreeable to the *Ruſſian* inhabitants who hire the natives to fiſh for them; for however impatient the maſter may be to taſte the new fiſh, the fiſhermen will have the firſt, looking upon it as a great ſin if they do not eat it themſelves, and with all due ceremonies.

136 The ſecond kind is only called red fiſh, in *Ochotſka*, narka. It is about 21 inches long, and flattiſh; its fleſh is extremely red; its head very ſmall; the ſnout ſhort and ſharp; the tongue bluiſh, with whitiſh ſides; its back bluiſh, with black ſpots; its belly white; and its tail forked. Its breadth is about a fifth part of its length; and it has ſcales large and round, eaſily ſeparating from the ſkin: it weighs about fifteen pounds. It is found in every river that runs either into the *Penſchinſka* or Eaſtern Sea, coming up in great ſhoals; and it is caught about
136 the middle of *June*. The *eukol* that is made of it, though very
226 pleaſant, preſently turns bitter; ſo that for the moſt part they either ſalt this fiſh, or boil it for its fat. There are two things worth notice concerning it: the firſt of which is, that part go before to the heads of the rivers, as if they were ſent out to examine them, where ſome of them are caught before the ſhoals appear at the mouths. The ſecond is, that this fiſh is more plenty in ſuch rivers as run out of lakes than others: nor does it live long in the former, but haſtens directly into the latter; in the depths of which it lies 'till the beginning of *Auguſt*, at which time it comes nearer the ſhore, and tries to get into theſe rivers that communicate with the lakes. Here the inhabitants catch them by nets, dams, or other methods.

1. [chivatsi]

The

l: Krasheninnikov N-5 (1736) 1764 Kamchadal

The third kind of this fiſh is called keta or kaeko; which is somewhat larger than the narka. The fleſh is white; the head flattiſh and longiſh; the ſnout is bent; the teeth, when it has been ſome time in the river, are like a dog's; its tongue is ſharp; its tail a little forked; its back black and green; its ſides and belly like other fiſh; and its ſkin is without ſpots. The *eukol* that is made of this fiſh they call their houſehold bread, being much more plenty than any other; as the ſeaſon of the fiſhery, which begins in *July* and ends about the middle of *October*, is drier and more proper for preparing it. This fiſh is caught in all the rivers both in the *Penſchinſka* and Eaſtern ſeas.

The gorbuſhe, or crook back, follows or ſometimes accompanies the keta. This fiſh is more plentiful than any other whatever; it is about eighteen inches long, and flattiſh; its fleſh is white; its head ſmall; its ſnout ſharp, and conſiderably crooked; its teeth ſmall; its back bluiſh, with round black ſpots; its ſides and belly like the other ſorts; and the tail forked. Though this fiſh is not bad, yet the inhabitants have ſuch plenty of what they eſteem better, that they uſe this only for their dogs.

The laſt of theſe kinds that come on ſhore is called white fiſh. This fiſh both in bulk and appearance is very like the keta; they differ in this indeed, that the keta has no ſpots, and the white fiſh has long black ſpots upon its back. It excels in taſte all the fiſhes that have white fleſh; and it agrees with the narka in this, that it moſt frequently haunts thoſe rivers that run out of the lakes, and is caught there in the ſame manner. The young ones, which accompany the old to take care of the roes and convoy the young fry down, are eſteemed by the inhabitants to be a different ſpecies, and are called milktchuch. So ſoon as the old ones have ſpawned, they take all care to provide for their own ſafety, retiring immediately to deep places where there are warm ſprings; and they are chiefly found in the ſprings near the *Bolſcheretſkoi* river

l: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

136 and the *Opalſkoy* lake: they are caught likewiſe during the whole
226 winter in thoſe ſprings that run into the *Kamtſchatka* from the ſouth; and near to where the old lower fort of *Kamtſchatka* ſtood they alſo abound, which is a great relief to the inhabitants. I myſelf was at this fiſhery in the end of *February*; however I found the fiſh at that time dryer and not ſo well taſted as in the harveſt. This fiſh eats very well, either ſalted, dryed, or
227 ſmoaked. It is caught frequently in the ſame net with the keta and narka; and thoſe which they uſe for this fiſhery are made of yarn about half as thick as that with which they make the nets for the chavitſi, and the meſhes are about an inch and a half wide.

136 All theſe different ſpecies of fiſh change their colours, turn lean and ugly, their ſnout bends, their teeth grow, and a ſcurf appears upon their ſkins. The chavitſi, narka, and white fiſh, change their ſilver colour to a red; the keta turns likewiſe red, ſtained with black ſtripes. Their fins and tails become reddiſh and blackiſh; in one word, they would never be taken for the ſame fiſh that enter the rivers, if theſe changes were not certain. The gorbuſhe alone preſerves its ſilver colour, and, whenever it loſes that, it dies.

It is incredible with what eargerneſs they go up the rivers, particularly the gorbuſhe. When they come to any place where the ſtream is ſtrong, and thoſe that are weak find it impoſſible by their own ſtrength to get up, they faſten their teeth upon the tail of ſome that are ſtronger, that they may be drawn up by them; ſo that ſeveral of theſe fiſh are found which have their tails bitten.

The true ſalmon may always be reckoned one of thoſe fiſh that come in ſhoals; and are found to go up the rivers *Kompakſve*, *Bircumkin*, and *Etchi*. I never ſaw theſe fiſh indeed, but have heard a great deal of them. Mr. *Steller* writes, that when

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

136 greatly: this obſervation probably holds in all kinds of ſalmon
137 trouts. In the fourth year alſo, the lower part to the ſnout be-
257 comes hooked. This ſpecies of fiſh ſwims along with the gor-
buſhe, and is caught with it in the ſame net, which is wove of ſmall yarn, the meſhes being about an inch wide. Such as live in the rivers are nouriſhed by the roes of other fiſh; and in the ſummer are found near the heads of ſmall rivers, which they leave in the ſpring. Such as are caught at the beginning of ſummer are ſalted, but thoſe caught later are frozen for the winter.

136 Another ſpecies of fiſh is called muikiſi, and is about the bigneſs of the narka; its ſcales are pretty large; its head is of a middling ſize; the upper part of its ſnout is like that of the goltſa, with the lower part hooked; it has teeth in its jaws and on the ſide of the tongue; its back is blackiſh, marked with round, or ſemicircular black ſpots; and upon each ſide has a large red ſtripe, which goes quite from the head to the tail: this diſtinguiſhes it from all the other ſpecies of this fiſh: it ſwallows all kinds of naſtineſs, and often catches the field mice that happen to ſwim upon the river; and is ſo particularly fond of the nortleberry, that if it ſees any growing upon the bank, it throws itſelf out, and ſeizes either the berry or the leaf of the plant. It is a well taſted fiſh, but is not caught in ſuch plenty as others are. They do not certainly know the time of its entering the rivers, but imagine it is before the ice is gone.

There is a third kind called kunſha, which is about three feet long; the head makes a ſeventh part of the length; the ſnout is ſhort and ſharp; its jaws are furniſhed with teeth; its back and ſides blackiſh, marked with yellow ſpots, ſome of which are round and others oblong; its belly is white; its lower fins and tail blue; and the fleſh white and well taſted. In *Ochotſka* it ſwims in ſhoals, but at *Kamtſchatka* it is more rare, and conſequently more eſteemed.

1.[Goltza] The

The fourth ſpecies is the harius, which is well known in *Siberia* and all *Ruſſia*; but thoſe that are here have the back fin longer than the others. Mr. *Steller* writes, that they come up into the rivers upon the firſt going off of the ice; but I never happened to ſee this fiſh in *Kamtſchatka*. 136

There is another ſpecies of red fiſh which reſembles the golſta, with this difference, that its head is larger, and the upper part of the ſnout a little hooked; its ſides are marked with red ſpots, like the malma: it is ſeldom longer than 20 inches.

Among the ſmall fiſhes which the *Kamtſchadales* feed upon are three ſpecies of ſmelts; one of which is called hagatch, the ſecond innaka, and the third uiki. The hagatch is our common ſmelt. The innaka differs from it a little, and is found in great plenty about the lake *Nerpech*. Uiki is thrown ſometimes upon the ſhore in vaſt heaps for 100 verſts together. They are eaſily diſtinguiſhed from the other ſpecies by a rough ſtripe that goes down the ſide. They commonly ſwim three together, and are ſo joined by the afore-mentioned rough ſtripe, that when you catch one the others cannot eaſily diſengage themſelves. The *Kamtſchadales* dry this fiſh as food for their dogs; but in caſe of ſcarcity they uſe it themſelves, although the taſte is very diſagreeable 136 231 262

The laſt kind of fiſh which we ſhall mention is the herring: theſe are found in great plenty in the Eaſtern Sea, but very ſeldom in the bays which lie upon the *Penſchinſka*. In my opinion they don't differ in the leaſt from the herring which we have in Europe; which Mr. *Steller* likewiſe confirms. In the harveſt they are found in large lakes, where they breed and winter: in the ſpring they ſwim towards the ſea. The greateſt fiſhery of them is in the lake *Viliutchin*, which is only about fifty fathom from the ſea, and has communication with it by a ſmall outlet. When theſe herrings enter the lake, this paſſage is ſhut up by the ſand being thrown into it, and remains ſo 'till the month of 136 226

March,

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

136 *March*, when it is washed away again by the high water arising
226 from the melting of the snow; which happens regularly every year. The herrings come every day to the mouth of the outlet, as if to inform themselves whether the passage was yet open, and remain there from morning 'till evening, when they return to the deeper part of the lake. The *Kamtschadales* observing this, break holes in the ice near the mouth of the outlet, where they put down their nets, and catch great quantities. This fishery continues so long as the ice remains upon the lake. They catch them likewise with nets in the summer, at the mouths of the rivers;
262 when they boil out the fat, which is as white as butter, and more
438 delicate than that of any other fish; and send it from the lower *Kamtschatkoy* fort (where the greatest quantity is made) as a rare present, to the other forts.

CHAP. X.

Of the BIRDS.

136 *KAMTSCHATKA* abounds in birds, but the in-
223 habitants make less use of them than of roots and fishes:
433 the reason of this is, that they don't well know how to catch them; and their fishery is so advantageous to them, that to leave that and go a bird-catching would be as ridiculous as for the husbandman to leave his plough and go a shooting.

136 I shall here divide the birds into three classes: the first, sea fowls; the second, the fresh-water fowls; and the third, those which frequent the woods and fields.

CLASS

5: Jochelson A-5 (1910-11) 1928 Kamchadal

was not necessarily mutual. Man might follow the mammoth in order to hunt him, but the mammoth had no need of man. Thus the remains of mammoth do not indicate that man lived in the same place, if there is no direct proof of it. However, the presence of the mammoth may postulate to climatic conditions fit for man to live in, and it remains for the future to find remains of the palæolithic man; but for the time being one may be right to hold to the theory of the peopling of Kamchatka in Recent Times, especially since no palæolithic artifacts were discovered in my excavations, and I feel authorized to say that the late peopling of Kamchatka may corroborate the theory of the reemigration of the Siberian Americanoids from America after the last glaciation subsided. To be fair, however, I must add that I had no time to make excavations in the Kamchatka River valley and that no regular excavations were made in the territory of the other Americanoids—the Koryak, Chukchee and Yukaghir.

GEOGRAPHY AND ADMINISTRATIVE DIVISIONS

The country of the Kamchadal—or the part of the Kamchatka Peninsula to the south, from the Amanino village to the west, and Osernaya River to the east—was a part of the Primorskaya Province. In 1909 a new province of Kamchatka was created, which included 6 districts: Okhotsk, Gishiginsk, Anadyrsk, Chukotsky, Commandor Islands and Petropavlovsky. The last district is the territory of the Kamchadal. The city of Petropavlovsk was made the capital of the province and the seat of a newly appointed Governor.

The former Territory of the Kamchadal is inhabited by 8,037 people, of which 3,370 are Russians, 3,555 Kamchadal, 802 immigrated reindeer Koryak and Tungus and 300 Chinese, Koreans and Japanese. There were also 10 Europeans and Americans.[1]

The Kamchadal have become Russianized and only the inhabitants of seven villages (between Amanino and Sopochnöye) of the western coast have preserved their native language—the western dialect of the Kamchadal language—and the inhabitants of the village Sedanka on the Tighil River speak the northern dialect. There were formerly four Kamchadal dialects, and at present even the Kamchadal, who speak two dialects, use more of a Russian-Kamchadal slang than the pure Kamchadal. The younger generation is learning Russian in the schools, and soon the Kamchadal language will be forgotten entirely, as was the case with the dialect of the Kamchatka River and with the southern dialect, which was spoken between the Great River (Bolshaya Reka) and Lopatka Cape. While the northern dialect of the Kamchadal on the Tighil River contains many Koryak words, the southern dialect had an intermixture of Kurilian words. Krasheninnikoff called the southern Kamchadal people Kurilians.

The Kamschdal had been and still remain a genuine fishing tribe. They did not adopt from their Koryak neighbors the reindeer, although they were

[1] According to official data of 1911. During the summer fishing season, Kamchatka's shores have many thousands of temporary dwellers. Russians who operate canneries and salteries bring thousands of laborers. The number of Japanese fishers at the time of my stay in Kamchatka was estimated at more than 10,000. About 250 Japanese schooners were lying near the shores and about ten Japanese steamers were coming from and leaving for Japan. According to the convention concluded after the Russian-Japanese War the Japanese were authorized to fish everywhere in Kamchatka waters except bays and river-mouths, but by bribing the guards they used to fish also in the inner waters.

hunting the wild Kamchatka variety of reindeer.

5: Jochelson A-5 (1910-11) 1928 Kamchacal

hunting the wild Kamchatka variety of reindeer. Fish, different species of salmon, ascend the Kamchatka rivers in such abundance that they amply satisfy the needs in food. The Kamchadal have no time during the short fishing season to dry or smoke all the fish for the winter and the greater part of it is put in holes covered with stones and earth, and during the winter it is consumed in a decayed state by dogs as well as by men.

To a certain degree the Kamchadal of the western coast hunt sea mammals, but, not having skin boats, they do not go out to the sea, but kill those seals, white whales (*Delphinopterus leucas*) and sea lions (seldom) which enter the mouths of rivers in order to catch the ascending fish. Thong nets are put up for that purpose. They also kill seals, spearing and shooting them at their rookeries.

Horned cattle and horses were imported into Kamchatka chiefly from the Okhotsk district, i. e., of the Yakut race. In spite of the fact that they are badly cared for, they became acclimatized in Kamchatka and are a strong race of domestic animals. The Kamchatka horses are small, short necked, wide breasted and with short legs. During the winter they become covered with long thick hair, particularly their legs. Horses are used only in summer—as riding and pack animals. During the winter they are set free and have to graze from under the snow; rarely are they given hay and they therefore turn wild and have to be captured in the summer and trained again for riding.

Cow's milk plays at present an important rôle in the food of the Kamchadal and Russian inhabitants of the country. They use sweet as well as sour milk and pot cheese. Butter is rarely made, although the milk is rich in fat. But the Kamchatka cows give a small quantity of milk, about two or three quarts a day, as a result of scanty feeding in winter and of being kept in cold stalls. The Kamchadal make little hay, as the season for fishing and hay making coincide. One cow may be reckoned for every three inhabitants. The number of cattle may be estimated, according to the writer's census, at about 2,000.

Prior to the advent of the Russian the only domestic animal of the Kamchadal was the driving dog. The Kamchadal dog was regarded as the best and biggest driving dog of Siberia; at present, as a result of unfavorable conditions of life, it has become small in size. The dogs work hard during the long winter, but during the entire summer they are tied up, otherwise calves and colts and sometimes cows and horses are in danger of being torn by them. They are kept far from the village and poorly fed. Owing to the economic, climatic and topographic conditions of the country, the Kamchadal can not dispense with the driving dog, and every family has from eight to fifteen dogs. The number of dogs in 1911 in Kamchatka, according to my census, was more than 5,000. The old Kamchadal sledge for riding astride is no longer in use, the Russians having introduced the type of sledge used all over eastern Siberia. The dogs are harnessed to the sledge, being tied in pairs to a long thong.

There are no domesticated small animals, as goats or sheep and birds, in Kamchatka, as they would be exterminated by the ever hungry dogs, which very often find means to free themselves.

6:Antropova E-4 (no date) 1964 RY3 Kamchadal RY3

north to the Nalachevaya River in the south. The second included Itel'mens living from the Nalachevaya River to Cape Lopatka, as well as the "Near Kurilers." The third group consisted of the Itel'mens of the western coast of the Kamchatka Peninsula (Sedanka-Khayryuzovo). The greatest differences were between the languages of the northern and southern groups. Of the dialects of the Itel'men language, only two have survived to our time—the Khayruyuzovo and the Sedanka, which were strongly affected by Koryak and Russian.

The question of the origin of the Itel'mens remains open. The archeological remains on the peninsula have not been studied sufficiently. They are represented by semiunderground dwellings, which hold large quantities of neolithic stone implements: arrowheads, spears, hatchets, scrapers, blubber lamps, well-made bone objects and fragments of pottery. These are very close to the Itel'men implements of the 17th and 18th centuries. Similar stone and bone objects were found by the first explorers of Kamchatka—S. Krasheninnikov (1737–1742) and G. Steller (1740–44).

The first ethnographic data about the Itel'mens were provided by V. Atlasov, who made a journey to Kamchatka from the Anadyr' Fort in 1697, with a detachment of Cossacks and Yukagirs. Atlasov followed the western coast, almost to the southern tip of the peninsula, and collected the first fur-tax from the Itel'mens. He found the Itel'mens at the height of the neolithic technique in making stone and bone implements. His "tales" (reports) abound in ethnographic materials. They provide fairly detailed descriptions of the material culture (villages, dwellings, clothing, methods of preparing food, etc.), the geographic distribution, and individual features of clan organization. Especially interesting are Atlasov's data on pottery-making, for only 40 years later, S. Krasheninnikov found no traces of this occupation among the Itel'mens.

Economy, Daily Life and Social Relations

Thanks to the remarkable work of Stepan Krasheninnikov, a participant in Bering's Second Kamchatka Expedition, we have a detailed account of the material production and social order of the Itel'mens in the first half of the 18th century, when they still retained their original culture.

They were fishermen who lived in permanent settlements along rivers. Their largest concentration was in the basin of the Kamchatka River. The main fishing season was during the salmon-run, when the fish surged upstream in dense masses to spawn. They fished with nets and hooks.

Nets were woven of nettle fiber. Fish was cured, made into yukola, and pickled in pits. Fish-heads were always pickled; this was a favorite dish.

The second important occupation of the Itel'mens was hunting. Kamchatka at that time was very rich in meat and fur animals. But fur animals were also hunted primarily for meat, since there was no market for the furs. V. Atlasov reported that the Itel'mens mixed chopped sable tails with the clay when making clay utensils.

An important role in the Itel'men economy was played by sea hunting. They hunted seal, fur-seal, and sea-beaver. The southern Itel'mens also hunted whales with arrows poisoned with plant poison.

None of the northern Siberian peoples engaged as widely as the Itel'mens in gathering wild plants. Most important in their diet were the tubers of sarana (a local name for various members of the lily family), sweet grass stems, the leaves of arnica, various berries, cedar nuts, etc. Plant tubers were dug out with a special digging implement of deer horn, tied to a wooden

6:Antropova E-4 (no date) 1964 RY3 Kamchadal RY3

Medical aerosleigh.

wheel transport such as the cart, was unknown before the Revolution. For cattle, the Itel'mens built cold barns or sheds and provided some supplementary fodder in winter. However, the milk yield was very low, and livestock mortality was high.

From the Russians, the Itel'mens obtained improved means of production: firearms, nets, etc. Stone and bone implements were completely abandoned in favor of metal ones. Russian clothing and utensils began to come into use. The primitive semidugout was gradually (and by the beginning of the 19th century, completely) replaced by wooden board dwellings, and occasionally by log houses of the Russian type. Simultaneously with the absorption of Russian culture by the Itel'mens, a reverse process was also taking place in the 18th and 19th centuries. Soldiers, Cossacks and peasants, who were systematically being resettled on the peninsula after the middle of the 18th century, married Itel'men women and acquired some elements of their way of life and culture. The result was that peculiar population of the peninsula which became known, as we have pointed out earlier, under the name of Kamchadals and was often mistakenly classified as Itel'men.

In the early 20th century, the condition of the Itel'mens deteriorated in consequence of the development of the Japanese capitalist fishing industry in Kamchatka. Predatory industrial fishing at the mouths of rivers during spawning runs caused almost annual failures of the native catch and led to inevitable famines.

Contemporary Life of the Itel'mens

During the civil war in the Far East, the Itel'mens actively helped the guerrilla units, and later the Red Army troops, in liquidating the White bands. The guerrilla units included many residents of the villages of Napana, Utkholok, Kovran and Sedanka. In 1921, the Soviet government was firmly established on the peninsula, and the reconstruction of the economy was launched.

7:Lesseps T-3 (1787-88)1790 Kamchadal

224 them; one would ſuppoſe they were of no value.

226 The Kamtſchadales have different ſeaſons alſo for fiſhing. Their ſalmon and trout ſeaſon is in June, their herring ſeaſon in May, and that of the ſea wolf in ſpring and ſummer, but principally in autumn.

They ſeldom uſe ſeines, but almoſt always common nets*, or a kind of harpoon, which they manage with great dexterity. Seines ſerve only for ſea wolves; they are made of leather ſtraps, and the meſhes are very large. They have another mode of fiſhing,

283 314 439 * Their nets are made of pack thread, like ours; they purchaſe it of the Ruſſians: there is another kind however, which they fabricate themſelves from nettles, of which they take care to lay up a conſiderable ſtore. They gather them in autumn, tie them in bundles, and place them under their balagans to dry. When their fiſhing and harveſts are compleated, they prepare their nettles. They ſlit them, and then ſtrip off the rind expertly with their teeth; the reſt they beat and ſhake till the filaments are ſeparated, and it is fit for ſpinning.

by

T:Lesseps T-3 (1787-88)1790 Kamchada

226 by cloſing up the river with ſtakes and branches of trees, ſo as to leave only a narrow paſſage for the fiſh, or ſometimes ſeveral, where they place baſkets, ſo conſtructed that, if the fiſh once enter, it is impoſſible for them to retreat.

231 Horſes are very ſcarce in Kamtſchatka.
492 I ſaw ſome at Bolcheretſk belonging to government, and intruſted to the care of the Coſſacs. They merely ſerve during ſummer for the carriage of merchandize and other effects of the crown, and for the convenience of travellers.

Dogs however abound in this country, and are ſo ſerviceable to the Kamtſchadales as to render the privation of the other domeſtic animals leſs felt by them. They ſerve all the purpoſes of carriage, and are fed without difficulty or expence, their food conſiſting entirely of the offals, or ſuch decayed

7:Lesseps T-3 (1787-88)1790 Kamchadal

TOWARDS THE END OF NOVEMBER THE COLD
132 became on a ſudden ſo ſevere, that in a few
166 days the rivers were all frozen, even the Bol-
226 chaïa-reka, which ſeldom happens, becauſe of the extreme rapidity of its current. The next day it got rid of the ice that covered it, and from that time I ſaw no more ſtop before Bolcheretſk, lower than the houſe of the governor. Though frozen in various places, it preſents a great number chaſms, where the water is ſeen to flow as uſual.

On each ſhore of the peninſula, there is a ſenſible difference in the atmoſphere. During the fine weather, a drought prevailed at Saint Peter and Saint Paul's, whereas at Bolcheretſk they complained of frequent ſhowers; meanwhile autumn had not proved this year more rainy than common. Very heavy rains are injurious in this country, becauſe they occaſion floods, which drive the fiſh from the rivers; a famine moſt diſtreſſing to the poor Kamt-

7:Lesseps T-3 (1787-88)1790 Kamchadal

132 fchadales is the reſult, as it happened laſt
166 yea: in all the villages along the weſtern
226 coaſt of the peninſula. This dreadful calamity occurs ſo frequently in this quarter, that the inhabitants are obliged to abandon their dwellings, and repair with their families to the borders of the Kamtſchatka, where they hope to find better reſources,
000 fiſh being more plentiful in this river. M. Kaſloff had intended to proceed along the weſtern coaſt, having already made his viſit through the eaſt; but the news of this famine determined him, contrary to his wiſhes, to return, rather than be driven to the neceſſity of ſtopping half way, or periſhing with hunger from the difficulty of procuring dogs and proviſion.

132 The wind varied conſiderably during my reſidence at Bolcheretſk; it was moſt commonly weſt, north-weſt, or north-eaſt; it blew ſometimes from the ſouth, but ſeldom from

22: Guillemard T-2 (1882) 1886 Kamchadal

Every year the port is visited by a
439 Russian cruiser, and, if her officers should chance to be as excellent
505 companions as I have on every occasion found those with whom I have been brought into contact, a traveller might possibly get the offer of a passage, which, if he has command of the French language, a strong head, and an unlimited capacity for sweet champagne, should be enjoyable enough. A steamer, or steamers, belonging to the Alaska Commercial Company make two voyages annually to the port, to ship the furs awaiting them there and at Bering Island. They start from Yokohama, and it would no doubt be possible to obtain a passage. On leaving Kamschatka for the second time, however, these ships do not return south, but proceed direct to San Francisco.

136 The weather upon our arrival was pleasant and invigorating
226 to a degree; the days absolutely hot, with a brilliant sun and
241 wonderfully clear atmosphere, and the nights cold, but bright. But for the mosquitoes nothing could have been more enjoyable. These pests, which render life in a northern climate almost unbearable during the summer, were not very numerous in Petropaulovsky itself, but in some parts of Avatcha Bay we found them abundant, while in others not one was to be seen. As every one knows, the presence of these insects is almost always dependent on the existence of marsh, low-lying ground, or clumps of birches and other trees in the neighbourhood; but here, oddly enough, we found no such reasons to account for their erratic distribution. The little gardens of the settlement were aglow with bright flowers, though choked with weeds and coarse grass. But little cultivation was to be seen; a few patches of potatoes, cabbages, and such like garden produce, surround the cottages here and there, but there are no cereals. Rye ripens in some parts of the valley of the Kamschatka River, and would probably do so here, according to Dr. Dybowski, but its growth is not attempted. To the Kamschatkan the harvest of the river and the sea is an affair of such supreme importance, and demands so much of his time, that he has but little leisure for agriculture even if he had the inclination.

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000 among them was no trace of Cook. Presently we came upon that imperturbable gentleman, placidly smoking a cigarette. He explained the matter in a few words:—"Very sorry, sir, but" (indicating the horse) "I've never been shipmates along o' one of them things before!"

133 136 501 We crossed the river in two dug-out canoes lashed together. These boats are as a rule small, and without attempt at elegance in shape, such as one sees in Borneo and other parts of the Malay Archipelago. Where the rivers are shallow, long poles are used to propel them, and indeed the natives always seem to prefer this implement to the paddle, wherever its use is possible. The Avatcha River is here about eighty yards in breadth; shallow for the most part, but with a centre channel about seven feet deep. It appeared to be teeming with salmon. Stari-ostrog, situated on the right bank, consists of ten huts and a large number of fish-drying sheds. The long Kamschatkan winters, during which it is difficult to procure food of any kind, and the consequent necessity of fish as an article of diet for almost every living creature in the settlements —the cows and horses even not excepted—create a need for a very large number of these buildings; and the consequence is that, to the eye of the new-comer, the villages appear very greatly larger than they really are. Scanty as the population of this wild country is, the amount of salmon annually consumed is absolutely enormous. At this little village, for instance, we were told that, during the season, 20,000 fish would be no uncommon catch for a single day! Here, however, owing to there being no other settlements higher up the river, they are permitted to stake the stream right across from bank to bank, and the number of fish thus obtained may probably be in excess of that in other places. The labour expended in gathering so abundant a harvest is, of course, very considerable, and during the season the inhabitants work day and night to get in a sufficient supply for the winter.

226 251 262 361

563 We were greeted by the headman and brought to his house, where we were regaled with milk, sour cream, coarse rye bread,

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000 were to pay seven roubles each. The Ispravnik and the King had not done badly; their charge had been exactly quadruple!

226 251 In company with our English-speaking friend we went to inspect the fish. These were drying in open sheds, much as tobacco is dried in the Southern States of America. Split in half as far as the tail, cleaned, washed, and deprived of its head, the salmon is hung across a stick in company with fifty or sixty others. These sticks are then placed a few inches apart, with their ends resting upon other poles which run from end to end of the shed. The fish are thus freely exposed to the air, but protected from the sun. They are not hung lower than about eight feet from the ground, on account of the dogs, who are occasionally seen gazing at them with longing eyes and watering mouths, experiencing the tortures of Tantalus. Excepting for a sledge-dog, however, the sight is not a tempting one. Swarming with countless millions of maggots, which distil in a gentle but unceasing rain upon the ground beneath, whitening it as with a shower of powdery snow, the fish seem to be so rapidly disappearing that one wonders how any remain till winter. Another sense beside that of sight causes the same reflection, but neither the dogs nor their masters are particular as to these little matters. The latter, indeed, prefer their fish in an advanced stage of decomposition, and have the same method of preparing it as I have seen in some parts of Lapland. The salmon are buried for three or four months in pits, and any difficulty in extracting them at the end of that time is overcome by means of a ladle!

133 137 It was late in the afternoon before we were again *en route*, our course lying north-west through the valley of the river. This bears in many places distinct evidence of the latter having been, at some period, of very much larger size. We then ascended the bluff of the old left bank, and rode through an interminable forest of birch-trees, which were here larger than I have ever seen them elsewhere. Many of them must have been at least a hundred feet high.

000 We began the next day with a more than usually

[Avacha--Analyst]

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132 at the base of the low range of hills bounding the plain,—the finger-marks, as it were, of the icy grip of winter.

231 361 We reached Narchiki early in the afternoon, and were greeted by the prolonged howls of innumerable dogs. Though the village boasts of only six huts, there are over one hundred and fifty of these animals to pull the sledges of the inhabitants by day, and to endeavour, in combination with other equally hungry, though happily smaller creatures, to disturb their rest by night. The sledge-dog, indeed, appears to do without sleep, and anything more hideous than their nocturnal concerts it would be difficult to imagine. Fortunately an open-air life and hard work are not generally compatible with insomnia, and after a few nights the traveller would be more apt to miss his music than to abuse it.

133 136 226 Narchiki is placed on a little branch of the Avatcha River, which is here not more than eighteen inches deep. Standing upon its banks we began for the first time dimly to realise the vast numbers of fish which must annually visit the country, and which may be said literally to choke its rivers. Hundreds were in sight, absolutely touching one another; and as we crossed the river our 136 226 horses nearly stepped upon them. Their back fins were visible as far as we could see the stream, and aground and gasping in the shallows, and lying dead or dying upon the banks, were hundreds more. The odour from these decaying fish was distinctly perceptible at a distance of a couple of hundred yards or more. In weight these salmon varied from seven to fifteen and even twenty pounds. They were for the most part foul fish,—blotchy with patches of red and white, and of the kind known by the Russians as the Garbusa;[1] but others in fair condition were to be found, and with a little trouble I was able to pull out three good ten-pound fish in as many minutes with a gaff. Any other method of fishing would have been useless. It would have been nearly impossible to make a cast without foul-hooking a fish, and nine-tenths, or more of them, were in an uneatable condition. Had we wished to do so, we

[1] *Salmo proteus* of Pallas.

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226 could have pulled these latter out of the water with the gaff until we were tired.

While we were engaged in procuring our supper by this simple method, a native came down and watched our proceedings. Taking a spear he went a little way up stream, and soon returned with half a dozen fish which were a great improvement upon our own selection,—for I can apply no better term to it. They were of three species:—one a long charr-like fish, of a brilliant salmon-colour beneath, but with the back dark green, and with a most peculiar lower jaw. This closes into a sort of groove or socket in front of the upper jaw, producing a very extraordinary under-hung appearance. Its native name is Gultsi.[1] The other fish were a grayling (*Thymallus*) somewhat like our own, but not so deep; and a species of trout with obsolete spots.

The vast quantities of salmon which fill the rivers of Kamschatka in the manner I have described cease in course of time to astonish the traveller, who goes down to hook his supper out of the stream as naturally as he gathers the firewood to boil his kettle. But to a new-comer the sight is an astounding one. The millions of fish that are caught, and form the food throughout the year of almost every living creature in the country, are, however, as nothing compared with the countless myriads that perish naturally. I had at first supposed that the rotting fish that lined the banks, and here and there lay piled in little heaps together, were the victims of some unexpected and fatal epidemic. But I soon learnt that there was nothing unusual in it, and that it was an annual phenomenon of as constant occurrence as the breaking up of the ice.

000 We entered one of the huts in order to eat our lunch and rest the horses before proceeding on our journey. It was combined with the stable, through which one had to pass before entering the only habitable room. This was tolerably clean, and boasted of a couple of chairs and a table; but we had already got beyond the region of glass, and the windows were made of strips of bear-gut

[1] *Salmo callaris*, Pall.

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136 August; but each has its own time of arrival, which, from its constancy, appears to be more or less independent of seasonal influences. A few fish apparently remain at or about the river mouths during the summer, and eventually return to the sea, but these are so few as to be scarcely worthy of mention. The vast majority—practically all, in fact—ascend the streams to spawn, and, having once done so, die. In the case of some species every fish appears to perish; in others, to which I shall refer, a few get back to the sea.

The kelts of these salmon exhibit, though in a far more intensified degree, the changes that are noticeable in our own salmon after spawning. The jaws are prolonged and hooked, and the teeth much developed. The back becomes somewhat humped—in one species enormously so—and the skin of that region so hypertrophied and spongy as to conceal the scales. Simultaneously the colour of the body surface changes, becoming livid or dusky, and blotched with red patches, or even entirely red. The flesh gets paler in colour and tasteless, and the whole aspect of the fish denotes its unfitness for food. As they ascend the river the salmon keep close together in large shoals, each fish keeping to the shoal of its own species and not mingling with others. Later in the year, after spawning-time, they of course become indiscriminately mixed.

136 226 825 During our visit to, and journey through the country, we met with at least six different species of the Salmonidæ in abundance. That there were others I am quite sure, but in the following list I have limited myself to noticing those only about which we personally obtained information:—

1. *Oncorhynchus orientalis* (Pall.)—Known to the Kamschatkans as the Tchervitchi, this fish is the king of the Salmonidæ both as regards size and flavour. On first arrival the Tchervitchi is silvery, the back and upper surface dark, and marked with dark spots, which also extend on to the dorsal fin and tail. The fish may have a length of four feet or more, and are rather broad: their extreme

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weight was given by Afanasi as "over two poods," which would be 72 lbs. We did not see any fish of this size, but a salmon, most probably of this species, was caught by the *Dido's* men in 1855, the weight of which is given by Tronson as 76 lbs. There is no doubt that they commonly run to as much as fifty or sixty pounds. The Tchervitchi is proper to the Kamschatka and Okhotsk Seas, apparently not being found elsewhere. According to Steller, it only frequents the larger rivers, and does not exist to the north of the 56th parallel. He gives the date of its arrival as April 20th for the Kamschatka River, May 10th for the Bolchaia-reka, and June for the rivers in Avatcha Bay. According to Afanasi, it comes up the Kamschatka River "early in May," and gets out of season in July. It certainly appears, as far as we could learn from the natives, to wait for some days at the mouths of the rivers before ascending them, which it does in shoals so large that, as Pallas tells us,[1] a little wave of water is driven up in front of them.

We did not meet with the Tchervitchi until we got to the Kamschatka River in early September. The inhabitants had then long since ceased catching them, and very few remained in the river. The balagans and drying sheds were, however, full of them, and many seemed not to have been in quite clean condition at the time of catching. As a kelt, the fish becomes marked with red on the sides, producing a streaked appearance, and the rostrum becomes hooked, especially in the male, though apparently not nearly to the same extent as in the Garbusa and other species. From the time of entering the river the Tchervitchi is said by Pallas never to feed. We made no inquiries of the people as to this point, but they told us that a certain, though very small proportion of this species do not die, but manage eventually to regain the sea. The flesh is of a rather pale red in colour, and is esteemed by the natives above that of any other fish.

2. *Oncorhynchus lycaodon* (Pall.)—This salmon is known to

[1] "Zoographia Rosso-Asiatica," vol. iii. p. 368.

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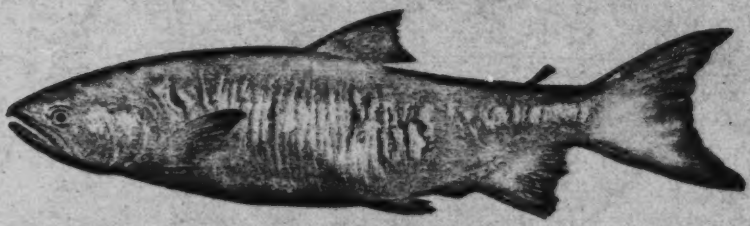
136 226 825 Kamschatkans[1] as the Krasnaya riba or red fish, but the name is invariably shortened to Krasna. In shape and general appearance it resembles our own salmon. On its first appearance in the rivers it is silvery, the belly white, the back dark with a bluish shade and almost without spots. In length it reaches three feet or more, and large examples would, I should think, scale over thirty pounds. It is found in the Okhotsk and Kamschatkan seas, and extends across to the American coast.[2] In the peninsula it seems to frequent large and small rivers alike, ascending the streams about the end of May or beginning of June, later than the Tchervitchi, but before



KELT OF HAIKO. (*Oncorhynchus lagocephalus.*)

the Haiko and Garbusa. Towards the end of August the Krasna is completely out of condition. It becomes a bright red all over like a gold fish, and both jaws get prolonged and hooked, while at the same time the teeth are wonderfully enlarged. None of the fish ever reach the sea after spawning—at least so we were informed by the natives;—and as this species is one of the most plentiful of all the Kamschatkan salmon, their bodies strew the banks in nearly as great numbers as the Garbusa.

3. *Oncorhynchus lagocephalus* (Pall.)—The trivial name of this fish is given by Steller[3] as Kaiko, but we found it invariably known as the Haiko. It is not unlike the preceding species (*O. lycaodon*),

[1] I have here and elsewhere used this term comprehensively as "an inhabitant of Kamschatka." It should not be confounded with Kamschatdale—the name applied to one of the original races inhabiting the peninsula

[2] Steller, "Beschreibung von dem Lande Kamtschatka."

[3] *Op. cit.* p. 157.

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the back being dark greenish, the sides silvery, and the belly white, but it differs in the greater bluntness of the rostrum and the pale colour of the flesh. It appears, as a rule, to run smaller than the Krasna: its area of distribution is said to be similar. It arrives at the mouth of the Kamschatkan rivers some little time after the Krasna and Tchervitchi, but its advent coincides more or less with the Garbusa or Hump-backed Salmon. About mid-July[1] this species ascends the streams, and is caught in great numbers. Later, the kelts show much the same changes as those of the Krasna, the jaws becoming much hooked; but they never acquire the deep and

KELT OF GARBUSA. (*Oncorhynchus proteus.*)

generally-diffused red of the latter species, that colour being usually confined to small patches on the belly and under surface. A species of bread is said by Kittlitz and others to be made of the Haiko, but we did not see it.

4. *Oncorhynchus proteus* (Pall.) is known to the inhabitants of the country as the Garbusa or Hump-back. On arrival from the sea this fish is said to be without any trace of the extraordinary development of the back from which it takes its name. It is without spots, except upon the tail—which is deeply forked—and is very silvery. It is said to frequent the rivers of the Okhotsk Sea and those of some of the Aleutian Islands, as well as Kamschatka. Roughly speaking, its length is from eighteen to twenty-four inches,

[1] I have also got "mid-June" in my notes, but I think the date given above is probably the correct one.

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and its weight seldom above fifteen pounds. As a rule it is considerably less.

The Garbusa swims up the rivers in company with the Haiko, and is the most abundant of all the Salmonidæ in Kamschatka. According to Pallas, the hump begins to appear even before the fish has spawned, and is generally supposed by the natives to result from the efforts made in ascending the stream! Its enormous development in the kelts can best be realised by reference to the annexed illustration. Both jaws become hooked at the same time, more so, perhaps, than in any other species, and in consequence, in an old kipper the mouth does not nearly close. Until the death of the fish the gibbosity increases, and the colour of the body-surface becomes more and more livid and brown, the sides and under part being irregularly blotched with blood-red. The vast majority of this species die in the month of August, and though some few live till the middle of September, the natives told us that none return to the sea. The flavour of the flesh is said to be very good when the fish first come up the river, but the Garbusa is looked upon almost as the dogs' private property, and is not much eaten by the natives. In the balagans and drying sheds it invariably occupies the lowest tier of all. The female fish is described by Pallas as much smaller than the male, and very much less numerous; the hump does not become so largely developed and the mandibular hooks are absent or slight. We did not, however, meet with many individuals agreeing with this description.

5. *Oncorhynchus sanguinolentus* (Pall.) is the Kisutchi of the Kamschatkans. The clean fish is silvery, and devoid of red colouration, despite its specific name. The dark greenish-brown back is marked with rather large black spots, and the snout is blunt, becoming afterwards developed in a most peculiar manner. Pallas says that the largest measure three feet and weigh from ten to twelve pounds,[1] but it is evident that a fish of this length would weigh considerably more. Most of those that we saw towards the

[1] "Zoographia Rosso-Asiatica," vol. iii. p. 379.

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136 226 825 lower part of the Kamschatka averaged, I should think, about twelve or fifteen pounds; the extreme weights, at a rough guess, being eight and twenty-five pounds.

The Kisutchi is the last of all the salmon to ascend the rivers. It arrives about the 10th or 12th of August, and in consequence is in good condition when most of the other species are uneatable. In the middle of September we found the majority of them clean fish, and it is not till the following month that they usually acquire the blood-stained tinge of the under surface, and the extraordinary snout to which I have just alluded. The latter presents a smoothly rounded protrusion about as large as a sixpence, over-hanging the lower jaw, and giving the fish a very comical expression. We learnt from our two hunters that the Kisutchi were caught until November, and Krasheninikov tells us[1] that they are found "during the whole winter in those springs that run into the Kamschatka from the south," which is possibly due to the fact that the water of some of these streams is warm. It appears to be a generally-distributed species, occurring in all the rivers of the peninsula. The flesh is very pale, almost white.

114 136 226 825 6. *Salmo callaris* (Pall.) is the Goletz or Gultsi of the natives. Krasheninikov says[2] that "the largest fish of this species, which lives sometimes five or six years, comes from the sea into the River Kamschatka, out of which it goes into the rivers that run into it, and by them to the lakes, where it grows almost as big as the *Chavitsi* (Tchervitchi), though it seldom weighs more than twenty pounds. They are found likewise very large in the Bistroy River; there their length is commonly twenty-eight inches, and breadth ten; they are of a dark colour,[3] have large teeth, and the lower jaw is crooked with a knob: it seems indeed of a different species. Those of three years old, which have been one year out of the sea, have a long head, are of a silver colour, with small scales, and

[1] "The History of Kamschatka," p. 148.

[2] *Op. cit.* p. 149.

[3] Steller also says, "auf dem Bauch und Flossen Zinnober-roth."

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small red spots; and such as have been two years out of the sea are round and longish, with small heads; and their flesh, which is reddish white, is hard and well tasted. With regard to their size, the first year they are long and small; the second they grow more in breadth than in length; the third the head grows considerably; and the fourth, fifth, and sixth years their breadth and thickness increases greatly: in the fourth year also the lower part to the snout becomes hooked."

Pallas adds that "these fish enter the rivers from the Eastern ocean in great numbers . . . in order to hybernate, being still without spots. They are said to remain torpid during the winter in the

GULTEH (*Salmo callaris.*)

depths of rivers, in shoals of thousands, until at the return of spring they seek the sea again, from about the 10th to the 20th of May. They surmount cataracts of whatever height by leaping, and in the same manner escape from nets one fathom deep. They force their way into the Kuril-Lake near the River Kamschatka,[1] notwithstanding a very high cataract, and hybernate in it in large numbers. Many remain for a long time in the rivers and lakes, but the greater number return in spring to the sea. When they come up from the sea they are without the red tint and spots, and shine with a silvery lustre; during the ascent they become gradually spotted with red, while they acquire a more or less red tint beneath the belly and on the fins, according to the comparative rapidity of the river currents."

Both the above accounts are very difficult to reconcile with that

[1] It is difficult to understand what lake is here meant. The Kuril Lake is at least 170 miles distant from the nearest point of the Kamschatka River.

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114 given us by the natives of this fish. In the first place the Gultsi,
136 as pointed out to us, was a long fish with somewhat rounded sides;
226 the under surface of a most beautiful salmon-colour, the body
825 marked with pink spots, and the back and upper surface dark greenish. The fish were in perfect condition, the coloration being evidently normal, and not due in any way to disease. To a piscatorial, though un-ichthyological eye they were Charr; a fish with which I was quite familiar in Lapland lakes and rivers,[1] but they differed in having the curious, upturned lower jaw to which I have already alluded.[2] The fish that Steller mentions, with their great breadth (depth) of ten inches, cannot well be of this species; and their migratory habits, and the fact that when they come from the sea they are "without the red tint and spots," is, I believe, opposed to what is as yet known of the life history of the Charrs. The natives distinctly told us that the Gultsi remains in the rivers throughout the year.

Two other species of salmon are mentioned by Steller as occurring in Kamschatka:—the Kundsha (*S. leucomænis*) and Mykysha (*S. purpuratus*), but we did not meet with either of them.

133 Late in the afternoon we arrived at some open grassy pools, the
136 head of a small affluent of the Kamschatka River. Mallard and teal were abundant, and having refilled our larder, we turned our attention to the numerous salmon that were splashing about in the shallow water. Whether owing to the fact that the stream was slightly warm or not I cannot say, but the majority of the fish were in better condition here than we had hitherto generally found them, and were in consequence less easy to gaff. After a few minutes' waiting we were, however, able to obtain our supper in the shape of two or three fine Kisutchi of from ten to fifteen pounds weight.
000 Salmon is never eaten to such perfection as in camp-life, where the interval between its death and digestion is reduced to a minimum;

[1] In some of the lakes in Lapland the Charr grows to a very large size. I have seen one which scaled over fourteen pounds.

[2] *Vid. ant.* p. 99.

22: Guillemard T-2 (1882) 1886 Kamchadal

361 721 241 R 177 .72

peninsula. Now, however, Melcova must be regarded as the chief town of the interior, and its proximity—for it is only fifteen versts distant—must always effectually keep its rival in check. We were glad to get warm and partially dried at the house of the head-man before starting again for this latter place. Some few signs of cultivation were apparent: a few potatoes and turnips, and a small field of rye, the first cereal we had met with since our arrival in the country. It looked miserable enough under the pouring rain, and probably had little if any chance of ripening.

133 136 226

Three more hours of rain and paddling brought us to Melcova. It was almost too wet for shooting, but we noticed two or three small parties of the red-necked Phalerope (*L. hyperboreus*) on our passage. Those that we obtained were in autumn plumage, and were most probably on their way to warmer latitudes. But few duck were to be seen. They had in all probability betaken themselves to the marshes at the onset of the rain, and the river was devoid of life. Before reaching the village an elaborate arrangement of fishing-stakes gave warning of the presence of what in Kamschatka may be termed civilisation. The stakes stretched right across the stream from bank to bank, but we found a small gap at the side sufficient to admit of the passage of a single canoe, and capable of being still further enlarged by pressing down the stakes. The arrangement for taking the fish consisted in the construction of small *currals* at intervals of about fifteen yards. These were long bottle-shaped baskets on the lobster-pot principle, furnished with doors opening at the lower end, by means of which the fish could be secured by gaff or otherwise. We learnt that there were very strict rules with regard to the complete barring of the river at this spot. The inhabitants are obliged to leave a free passage for the fish at the time of their first arrival in the spring, and also on certain days in the week or month at a later period. But for this arrangement the people of Sherowmy and Werchni Kamschatka would of course be without means of subsistence during the winter months.

22: Guillemard T-2 (1882) 1886 Kamchadal

136 Since leaving Kluchi we had spent a good deal of time in trying to obtain a specimen of Pallas's Northern Sea Eagle (*Thalassaëtus pelagicus*)—a species which, at this part of the river, is by no means uncommon. It is a magnificent bird, and is especially conspicuous from the large white shoulder-patches and tail, but owing to its shyness it is extremely difficult to approach. We were, unfortunately, not provided with a rook rifle, and the few long shots we obtained were unsuccessful. Once only did we get a bird fairly within shot, and the two barrels of No. 2 that he received at a distance of thirty yards seemed to have no effect whatever upon him. This eagle appears to be chiefly confined to the lower part of the Kamschatka River, for we did not meet with it before reaching the neighbourhood of the great volcanoes.

226 252 262 The natives are prevented by law from barring the river in the lower part of its course, and here the salmon are taken chiefly with seine and drift nets. The V-shaped curral-trap of stakes, with baskets on the lobster-pot principle, is also frequently seen; a system which, as I have already stated, is used to bar the river right across at Melcova. The fat of the Kisuchi salmon is regarded as a great delicacy, and is prepared in considerable quantities at this season. A canoe is filled with water, and a number of the fish placed in it. Into this large red-hot stones are dropped, thus boiling the contents, which are meanwhile constantly stirred. The fat is then removed as it rises to the surface.

133 224 The low and muddy shores of the river in this part of its course are in many places intersected with small creeks, at the mouths of which two tall poles may often be noticed. These are used for taking ducks at flight time, by a plan which is not uncommon in other parts of the world. A fine net is hung between the two poles, which the hunter lets fall as the birds fly against it. By this means we were told that large numbers are often caught.

000 We woke on the morning of September 15th to a most miser-

24: Lansdell-638 [2] M-2 (1879) 1882 Kamchadal
116, 133, 161, 226, 361

" The number of the Kamchatdales, strictly so called, is estimated at 3,000. Their capital is Petropavlovsk, the only town on the eastern coast of the peninsula. (1)

1. It is situated on the right shore of the splendid Bay of Avatcha, which may claim with Rio Janeiro and San Francisco to be one of the finest harbours in the world. It is perfectly protected from the winds, and, transplanted to a more favourable position, it might be one of the greatest of markets; but since the fishery of the whale in the surrounding seas has lost its importance, Petropavlovsk has sunk from a place of 1,000 inhabitants to one of 500. Mr. Dobell, who lived in the peninsula five years, says that he found there many dykes and mounds, from the existence of which he argues that the country was once thickly populated."

24: Lansdell-645-646 M-2 (1879) 1882 Kamchadal
116, 137, 177, 226, 241, 262

" In certain valleys, especially in those of Kamchatka, the grass exceeds the height of a man, and the Russian settlers make hay three times a year. The culture of cereals is of little profit; oats thrive best. Hemp has been grown, but not in sufficient quantities to replace the nettle as a textile thread. In fact, gardening has succeeded better than agriculture, and now the natives cultivate in hundreds of gardens cabbages, potatoes, beetroot, turnips, carrots, and other vegetables introduced by the Russians in the last century. All these, however, added to their other kinds of food, barely give sustenance enough to the Kamchatdales and their dogs, without which it would be almost impossible for them to leave their huts at certain times of the year. During the four months of summer they must lay up dry fish to provide for eight months of winter, and the normal amount of winter food for a pack of half-a-dozen Kamchatdale dogs is 100,000 herrings. Besides [646] this the owner's family must be nourished, and hence, if a bad season comes, and the fishing or hunting fails, death is certain; for to the greater part of the natives who have no deer, winter and want are synonymous terms."

27: Sauer--298 [2] T-2 (1789-93) 1802 Kamchadal
116, 136, 226

"The fish of the bay of Avatsha are, cod all the year through; thornbacks, flounders, and halibuts, as soon as the ice begins to break; whitings are caught all the winter by the boys and girls, who make a hole in the ice, lie flat upon it, and look into the water, holding in it a horse-hair noose on the end of a stick, which they get round the fish, and by these means haul them up very fast. Herrings and smelts are the first passage fish that appear (the former in immense shoals towards the latter end of April), and they remain till the beginning of June: their numbers, indeed, are incredible."

137 enough to bear the nartes. I crossed two other small rivers by bridges for that reason. The scenery was very beautiful, a lofty range of mountains lay to the east with a good deal of fine timber, while the flat country is one fine uninterrupted meadow,
361 without a single cow to feed upon it. Stchappinat
161 has seven dwellings and fifty-two inhabitants, and,
136 it is said, the finest fish in the peninsula, though but
226 few are actually procured from it: they are considered so delicious that the inhabitants send them to the seat of government as presents to the chief and officers. The causes of their comparative scarcity are probably the depth and rapidity of the river, as well as the smallness of the nets; for unless the river be actually swarming with fish, it is seldom that the inhabitants can provide themselves with a sufficient supply.

137 To Massura are forty miles of a well wooded
361 country, and fine meadows upon the banks of the
161 river. I almost flew the distance, being scarcely
234 six hours in performing it. There are ten dwellings and sixty people, civil and hospitable to a proverb; a considerable quantity of cattle are in the neighbourhood, feeding on a rich pasture which runs to Kirgannick twenty-five miles further, where I got sight of the magnificent mountain scenery over hanging Verchney Kamtchatsk. One Sopka
361 (Peak) is especially remarkable. Milkova, a
563 Russian peasant village, ten miles distant contains fifteen houses and one hundred and twenty inhabit-